

TITLE

MULTI-LAYER SUBSTRATES HAVING AT LEAST TWO DISSIMILAR  
POLYIMIDE LAYERS AND A CONDUCTIVE LAYER, USEFUL FOR  
ELECTRONICS-TYPE APPLICATIONS, AND COMPOSITIONS  
RELATING THERETO

ABSTRACT

The present invention relates to a multi-layer laminate having a low glass transition temperature polyimide layer, a high glass transition temperature polyimide layer, and a conductive layer.

The low glass transition temperature polyimide layer is synthesized by contacting an aromatic dianhydride with a diamine component, the diamine component comprising about 50 to about 90 mole % aliphatic diamine (the remainder being aromatic diamine) having the structural formula  $H_2N-R-NH_2$  wherein R is hydrocarbon from  $C_4$  to  $C_{16}$ . The low glass transition polyimide is an adhesive and has a glass transition temperature in the range of from  $150^{\circ}C$  to  $200^{\circ}C$ .

The high glass transition temperature polyimide layer has a glass transition temperature above the low glass transition temperature polyimide layer and is a thermoset polyimide.

A multi-layer-layer substrate of the present invention has the high glass transition temperature polyimide layer positioned between the conductive layer and the low glass transition polyimide, or optionally contains an additional low glass transition temperature polyimide positioned between the conductive layer and the high glass transition polyimide layer.

KK/dmm